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IN REPLY
REFER TO DSCC-VAT October 13, 2004

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Drafts of MIL-PRF-83383E, MIL-PRF-83383/1E, MIL-PRF-83383/2E, MIL-PRF-83383/4E; Project Numbers 5925-0372, 5925-0369, -0370, -0371.

The initial drafts of the subject documents are now available for viewing and downloading from the DSCC-VA web site:

http://www.dscc.dla.mil/Programs/MilSpec/initialdrafts.asp

This initial draft documents are being forwarded for your review and comment. The revisions contain updating of canceled references, drawing updates, latest military specification format updating, amendment incorporation, and editorial changes. Highlighting has been used for easy change recognition.

Concurrence or comments are required at this Center no later than 45 days from the date of this letter. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians or this office, as applicable, in sufficient time to allow for consolidating the department reply.

Please forward your comments or concurrence electronically to the project engineer listed below. This can be in the form of a return e-mail, with or without an attached text file. If an electronic response is not possible, we will accept comments via letter, facsimile, or phone call but only after you have contacted the project officer. Any further coordination concerning this document will be circulated only to firms and organizations that furnish comments or reply that they have an interest.

The point of contact for this document is Mr. William E. Sindelar, DSCC-VAT. The preferred method of contact is via e-mail: william.sindelar@dla.mil. Mr. Sindelar can also be reached at 614-692-0556/DSN 850-0556, or by facsimile 614-693-1644/DSN 869-1644.

KENDALL A. COTTONGIM
Chief
Electronic Components Team

Attachments

cc:
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Navy - AS
Air Force - 11
VQP
CSA

NOTE: This draft, dated October 13, 2004 prepared by DLA-CC has not been approved and is subject to modification. DO NOT USE FOR ACQUISITION PURPOSES.

(Project Number 5925-00371)

INCH-POUND

MIL-PRF-83383/4E

SUPERSEDING
MIL-C-83383/4D
28 May 1999

PERFORMANCE SPECIFICATION SHEET

# CIRCUIT BREAKERS, REMOTE CONTROL, AC, THERMAL, TRIP-FREE, SERIES TRIP, TRIPLE POLE, AUXILIARY CONTACTS (5 TO 100 AMPERES)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and MIL-PRF-83383.

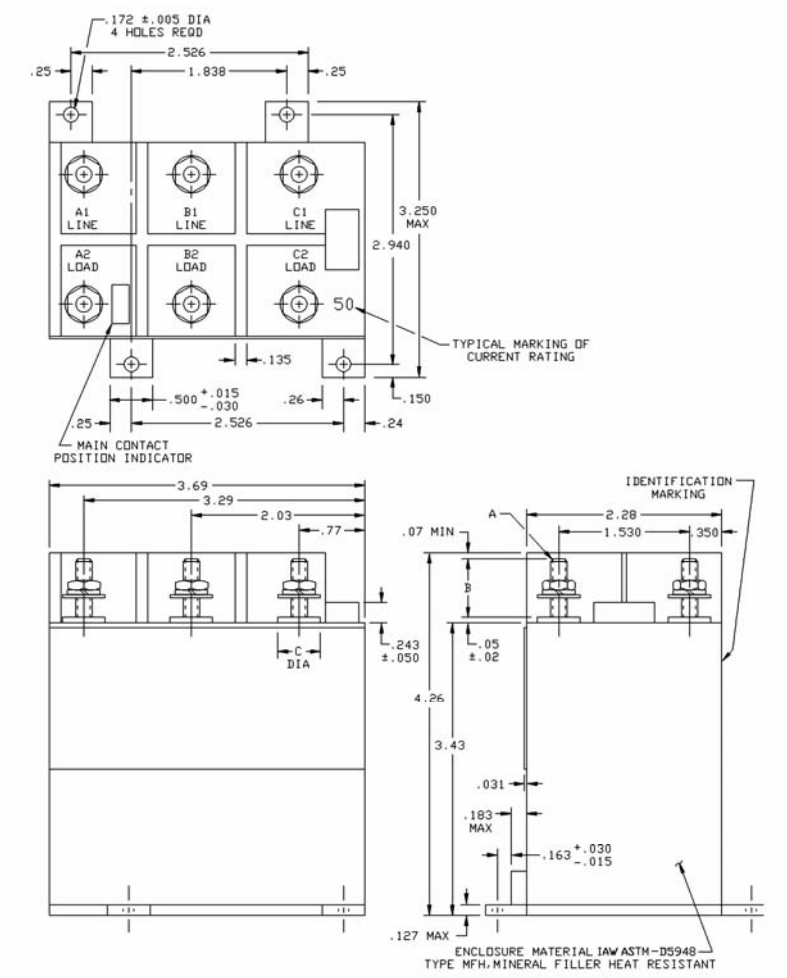



FIGURE 1. Dimensions and configuration.

*

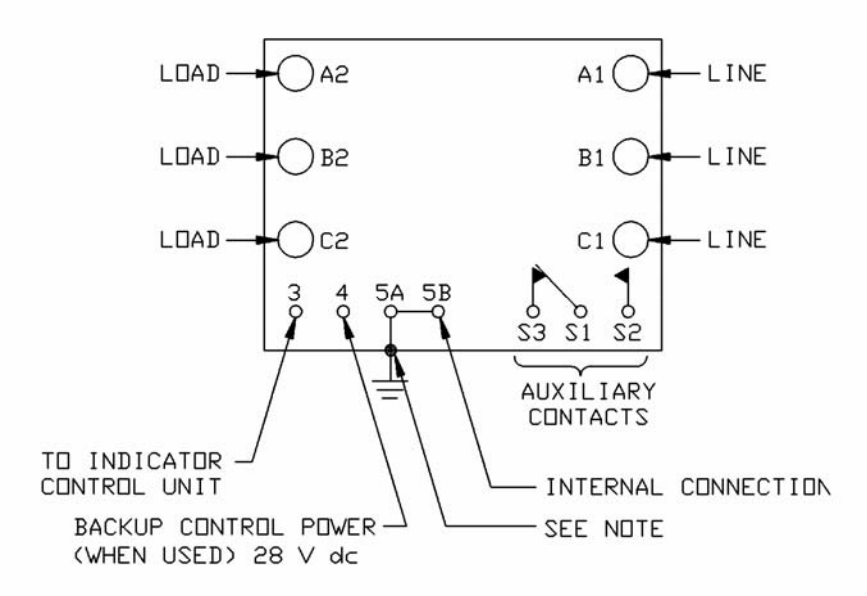
| Current rating amperes | A | B +.030 -.000 | C | Nut 1/ | Lock washer 2/ | Flat washer 3/ |
|---|---|---|---|---|---|---|
| 5 to 25 | .190-32UNC-2A | .500 | .500 | AN315-3R | MS35338-43 | NAS1149F0332P |
| 35 to 100 | .250-28UNF-2A | .610 | .610 | AN315-4R | MS35338-44 | NAS1149F0463P |

1/ Part number is from National Aerospace Standard NASM315.
2/ Part number is from National Aerospace Standard NASM35338
3/ Part number is from National Aerospace Standard NAS1149.

| Inches | mm | Inches | mm | Inches | mm | Inches | mm |
|---|---|---|---|---|---|---|---|
| .015 | 0.38 | .127 | 3.23 | .500 | 12.70 | 2.526 | 64.16 |
| .02 | 0.5 | .163 | 4.14 | .600 | 15.24 | 2.940 | 74.68 |
| .030 | 0.76 | .172 | 4.37 | .610 | 15.49 | 3.250 | 82.55 |
| .031 | 0.79 | .183 | 4.65 | .77 | 19.6 | 3.29 | 83.6 |
| .050 | 1.27 | .24 | 6.1 | 1.530 | 38.86 | 3.43 | 87.1 |
| .07 | 1.8 | .243 | 6.17 | 1.838 | 46.69 | 3.69 | 93.7 |
| .135 | 3.43 | .25 | 6.4 | 2.03 | 51.6 | 4.26 | 108.2 |
| .150 | 3.81 | .350 | 8.89 | 2.28 | 57.9 | | |

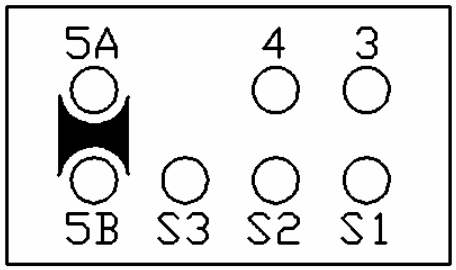
NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ±.015 (0.38 mm) for three decimal places and ±.03 (0.76 mm) for two decimal places.
4. Stiffening webs at mounting flanges shown for reference profile as required.

FIGURE 1. Dimensions and configuration - Continued.




NOTE: Terminals 5A and 5B shall be internally grounded to the mounting flange(s).

FIGURE 2. Schematic.




Note: Terminal junction system (TJS) module shall accept pin contacts P/N M39029/1-100 or -101
* as specified in MIL-C-39029/1.

FIGURE 3. Terminal junction system module.

TABLE I. Dash numbers and characteristics.

| Dash number | Current rating (amperes) | Tripping times from -54°C ±5°C to +71°C ±5°C (time in seconds) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Percent rated current | | | | | |
| | | 200 | | 400 | | 1000 | |
| | | Min | Max | Min | Max | Min | Max |
| 01 | 5.0 | 7 | 80 | 1.2 | 10 | .3 | 1.2 |
| 02 | 7.5 | 11 | 80 | 2.4 | 13 | .33 | 1.1 |
| 03 | 10.0 | 12 | 80 | 2.8 | 11 | .42 | 1.3 |
| 04 | 15.0 | 13 | 80 | 1.7 | 10 | .35 | 1.2 |
| 05 | 20.0 | 14 | 80 | 2.9 | 9.6 | .4 | 1.3 |
| 06 | 25.0 | 15 | 80 | 2.6 | 10 | .4 | 1.3 |
| 07 | 35.0 | 16 | 80 | 2.8 | 11 | .35 | 1.3 |
| 08 | 40.0 | 16 | 80 | 2.6 | 10 | .36 | 1.3 |
| 09 | 50.0 | 13 | 80 | 2.9 | 10 | .4 | 1.25 |
| 10 | 60.0 | 13 | 80 | 2.4 | 16 | .26 | 1.8 |
| 11 | 75.0 | 13 | 80 | 2.5 | 16 | .26 | 1.8 |
| 12 | 80.0 | 14 | 80 | 2.7 | 12.5 | .3 | 2 |
| 13 | 100.0 | 17 | 63 | 3.5 | 13 | .35 | 1.9 |

REQUIREMENTS:

Interface and physical dimensions: See figure 1.

Weight: 2.250 pounds (1,022 grams), maximum.

Trip indication: See figure 1.

Terminals: See figures 1 and 2.

Auxiliary contact terminals:

Contact capacity at 28 V dc and 115 V ac, 400 Hz shall be 3 amperes resistive, 1.5 amperes inductive, and 0.5 ampere lamp load.

Voltage rating: 115/200 V ac, 400 Hz.

Current ratings: See table I.

Tripping times: See table I.

Response time: 25 milliseconds, maximum.

Power requirements and response time at minimum voltage:

Standby current drain and actuation current:

Test voltage: 28 ±0.5 V dc to TJS module, then 200 ±2 V line to line, 400 Hz, 3 phase ground neutral to line terminal. Actuating current, 3.5 amperes dc and 11 amperes ac rms maximum.

Maximum operating time at minimum voltage:

Test voltage: 181 V ac rms maximum line-to-line, 3 phase.

Endurance:

Electrical:

5 to 25 amperes: 30,000 cycles resistive or inductive or motor load or lamp load.

35 to 50 amperes: 30, 000 cycles resistive or inductive or motor load or 25,000 cycles lamp load.

60 to 100 amperes: 30,000 cycles resistive or inductive load or 25,000 cycles motor load.

Interrupting capacities:

G - 3,600 amperes, single phase and 2,160 amperes, three phase.

H - 3,600 amperes, single phase and 2,160 amperes, three phase.

Other marking:

Current rating: See figure 1.

Line and load terminals: See figure 1.

Terminal junction system (TJS) module: See figure 3.

Position indication: See figure 1. Indication is provided by a lens over “open” and “closed” on red and green background.

Part number: M83383/04- (dash number from table I) (e.g., M83383/04-01).

Indicator/control unit (I/CU): In order to maintain compatibility between the RCCB and the I/CU, the following must be observed when making an I/CU selection:

* a. The I/CU must be a ½ ampere rated circuit breaker (MS22073-1/2 or MS26574-1/2, as specified in MIL-C-5809, or equivalent).

b. The line impedance (terminal 3 to I/CU) plus the I/CU impedance plus I/CU to ground connection.

c. The I/CU must respond to a decreasing current pulse of $I^2t \leq 2$ throughout the temperature range.

CAUTION TO USERS:

Coordination between devices supplied by different manufacturers should be verified by the user.

* Referenced documents. In addition to MIL-PRF-83383, this document references the following:

NASM315 NASM35338 NAS1149
MIL-C-5809 MS22073 MS26574 MIL-C-39029/1

* The margins of this specification are marked with asterisks to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:
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(Project 5925-0371)